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No. 105, ORIGINAL

In The

SUPREME COURT OF THE UNITED STATES
October Term, 1994

STATE OF KANSAS,

Plaintiff,

v.

STATE OF COLORADO,

Defendant,

and

UNITED STATES OF AMERICA,

Defendant-Intervenor.

KANSAS' EXCEPTIONS TO THE 1994 REPORT OF THE SPECIAL MASTER AND BRIEF IN SUPPORT OF EXCEPTIONS

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KANSAS' EXCEPTIONS TO THE 1994 REPORT OF THE SPECIAL MASTER

The State of Kansas takes exception to the following recommendations in the Special Master's 1994 Report:

1. That the Court grant Colorado's Motion to Dismiss Kansas' Trinidad Reservoir Claim;

2. That the Court reject Kansas' claim that Colorado's Winter Water Storage Program has violated the Arkansas River Compact; and

3. That the Court reject Kansas' method for determining the usability of depletions of stateline flows pursuant to Article IV-D of the Arkansas River Compact.

Respectfully submitted,

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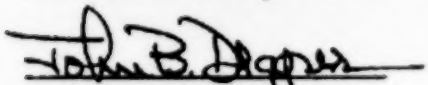

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KANSAS' BRIEF IN SUPPORT OF EXCEPTIONS

QUESTIONS PRESENTED

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1. Did Colorado violate the Arkansas River Compact by refusing to abide by the Trinidad Reservoir Operating Principles adopted by the Arkansas River Compact Administration?

2. Did the Special Master err in rejecting Kansas' claim that Colorado's Winter Water Storage Program has violated the Arkansas River Compact:

   (a) Because he placed the risk of uncertainty resulting from a lack of Colorado data on Kansas; or

   (b) Because he relied on a basis as to which the record was admittedly incomplete?

3. Did the Special Master err under Compact Article IV-D when he chose a long-term averaging method for determining usability and rejected Kansas' daily method?

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JURISDICTION

The State of Kansas invoked the original jurisdiction of the Court under Article III, Section 2, Clause 2 of the United States Constitution and the Judiciary Act, 28 U.S.C. § 1251(a) (1988) on December 16, 1985. Leave to file a bill of complaint was granted by the Court on March 24, 1986.

CONSTITUTIONAL PROVISIONS, STATUTES AND REGULATIONS INVOLVED

This case involves:

1. Article III, Section 2, Clause 2 of the United States Constitution which provides in pertinent part as follows:

> In all Cases affecting Ambassadors, other public Ministers and Consuls, and those in which a State shall be a Party, the supreme Court shall have original Jurisdiction.

2. 28 U.S.C. § 1251(a) (1988) which provides as follows:

> § 1251. Original jurisdiction
> (a) The Supreme Court shall have original and exclusive jurisdiction of all controversies between two or more States.

3. The Arkansas River Compact, 63 Stat. 145 (1949) ("Compact") which is reprinted as Exhibit 1 in the Appendix ("App.") to the Master's 1994 Report ("Rep.") and particularly Articles II, IV-D and VIII-A & B thereof. Article II provides as follows:

> The provisions of this Compact are based on (1) the physical and other conditions peculiar to the Arkansas River and its natural drainage basin, and the nature and location of irrigation and other developments and facilities in connection therewith; (2) the opinion of the

United States Supreme Court entered December 6, 1943, in the case of *Colorado v. Kansas* (320 U.S. 383) concerning the relative rights of the respective States in and to the use of waters of the Arkansas River; and (3) the experience derived under various interim executive agreements between the two States apportioning the waters released from the John Martin Reservoir as operated by the Corps of Engineers. Rep., App., Ex. 1, at App. 2.

Article IV-D provides as follows:

> D. This Compact is not intended to impede or prevent future beneficial development of the Arkansas River basin in Colorado and Kansas by Federal or State agencies, by private enterprise, or by combinations thereof, which may involve construction of dams, reservoir, and other works for the purposes of water utilization and control, as well as the improved or prolonged functioning of existing works: Provided, that the waters of the Arkansas River, as defined in Article III, shall not be materially depleted in usable quantity or availability for use to the water users in Colorado and Kansas under this Compact by such future development or construction. *Id.*, at App. 5.

Articles VIII-A & -B provide as follows:

> A. To administer the provisions of this Compact there is hereby created an interstate agency to be known as the Arkansas River Compact Administration herein designated as "The Administration."
>
> B. The Administration shall have power to:

(1) Adopt, amend and revoke by-laws, rules and regulations consistent with the provisions of this Compact;

(2) Prescribe procedures for the administration of this Compact: Provided, that where such procedures involve the operations of John Martin Reservoir Project they shall be subject to the approval of the District Engineer in charge of said Project;

(3) Perform all functions required to implement this Compact and to do all things necessary, proper or convenient in the performance of its duties. *Id.*, at App. 11.

4. Trinidad Dam and Reservoir Project Operating Principles and Minutes showing adoption by the Arkansas River Compact Administration on June 6, 1967, which are included in the Appendix to this Brief.

STATEMENT OF THE CASE

This is an action by the State of Kansas to enforce the Arkansas River Compact approved by the legislatures of Kansas and Colorado and by Congress in 1949. After trial, the Master found that increased well pumping in Colorado, Kansas' largest claim, constituted a violation of the Compact, but he ruled against Kansas on several important points.

I. Physical Features.

The Arkansas River rises in the Rocky Mountains near Leadville, Colorado, and flows generally southerly and then easterly through the city of Pueblo, Colorado. From Pueblo it continues eastward across the plains to the Colorado-Kansas state line. After crossing the state line, the river flows eastward to Garden City, Kansas, and through the states of Kansas, Oklahoma and Arkan-

sas, ultimately entering the Mississippi River southeast of Little Rock, Arkansas.

The portion of the river at issue extends from the river's headwaters to Garden City, Kansas. *See* Rep., vol. I, at 35-40. The primary depletions of water in this reach are caused by the irrigation of crops. *See id.* In the portion of the Arkansas River between Pueblo and the state line, the water is applied to some 320,000 acres of irrigated land through diversion and rediversion of surface water and withdrawals from some 2,500 wells along the river. Rep., vol. II, at 203; Pl. Ex. 30, Table 1 (R. vol. 21, at 117, vol. 22, at 21, 30), Pl. App., Item 1.[1]

The three major reservoirs involved in this litigation are (1) John Martin Reservoir, about 58 miles upstream of the state line in Colorado; (2)Pueblo Reservoir at Pueblo, about 130 miles above John Martin Reservoir; and (3) Trinidad Reservoir at Trinidad, Colorado, somewhat more than 160 miles above John Martin Reservoir on the Purgatoire River, a major tributary of the Arkansas River. *See, e.g.*, Rep., vol. I, Map in pocket.

II. The Compact.

In the first half of the twentieth century, Kansas twice petitioned this Court, unsuccessfully, to establish an equitable apportionment of the flows of the Arkansas River and to obtain an injunction against further depletions in Colorado. *See Kansas v. Colorado*, 206 U.S. 46 (1907), and *Colorado v. Kansas*, 320 U.S. 383 (1943). In 1943 the Court recommended that the states resolve their differences by compact under Article I, Section 10, Clause 3 of the Constitution. *Colorado v. Kansas*, 320 U.S. at 392.

In response to this recommendation and in recognition that the states could benefit from the construction of John Martin Res-

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[1] The pages in the record at which an exhibit appears, at which it was offered in evidence, and at which it was ruled on by the Master will be given in parentheses. *See* Sup. Ct. Rule 24.5. "R" refers to the trial transcript of proceedings.

ervoir by the U.S. Army Corps of Engineers, the states negotiated a compact, equitably apportioning the waters of the Arkansas River.[2] *See* Arkansas River Compact, Arts. I, II (Rep., App., Ex. 1, at App. 1-2). The states reached agreement on December 14, 1948, *id.* at App. 16; the legislatures of Colorado and Kansas approved the Compact shortly thereafter; and Congress approved the Compact on May 31, 1949, Act of May 31, 1949, 63 Stat. 145.

The Compact consists of nine articles. In addition to the statements of purpose and basis (Arts. I & II), the Compact includes provisions regarding: Definitions (Art. III); limitations on the scope of the Compact, John Martin Reservoir generally and prohibition of material depletions of the river in usable quantity or availability (Art. IV); operating procedures for John Martin Reservoir (Art. V); jurisdiction (Art. VI); miscellaneous subjects (Art. VII); creation, powers and duties of the Arkansas River Compact Administration ("Compact Administration") (Art. VIII); and sovereignty of the United States and amendment of the Compact (Art. IX).

One of the Compact negotiators' purposes was to maintain the status quo. Rep., vol. I, at 99-102; Jt. Ex. 4, at 12-54 to -55 (R. vol. 5, at 53, 83, 86), Pl. App., Item 10; Jt. Ex. 3, at 13-100 (R. vol. 5, at 53, 83, 86), Pl. App., Item 9; Pl. Ex. 129, vol. II, at 387 (R. vol. 2, at 29, R. vol. 9, at 84, Admitted by written order of 11/16/93), Pl. App., Item 2. The uses already established in Colorado and Kansas were to be preserved but not enlarged, and the benefits of John Martin Reservoir were to be equitably apportioned. These purposes appear in Articles I-B and IV-D.

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[2] "Waters of the Arkansas River" means the waters originating in the natural drainage basin of the Arkansas River, including its tributaries, upstream from the state line, and excluding waters brought into the Arkansas River Basin from other river basins. Compact, Art. III-B, Rep., App., Ex. 1, at App. 2-3.

III. Colorado's Violations of the Compact.

After the Compact was adopted, Colorado undertook three developments which led to Kansas' claims that Colorado has violated the Arkansas River Compact:

First, Colorado permitted the installation of some 1,500 wells along the river tapping the shallow alluvial aquifer which is in direct hydraulic connection with the river. *See, e.g.*, Pl. Ex. 30, Table 1 (R. vol. 21, at 117, vol. 22, at 21, 30), Pl. App., Item 1; Rep., vol. I, at 113-17. In addition, Colorado allowed increased withdrawals from pre-Compact wells over and above the amounts that had been pumped prior to the Compact. R. vol. 82, at 139, Pl. App., Item 23. Although Colorado was one of the original prior appropriation doctrine states with respect to surface water,[3] it has never effectively regulated the wells in the Arkansas River Valley under the prior appropriation system. R. vol. 18, at 46, Pl. App., Item 20; Rep., vol. I, at 139. If wells had been regulated, most would not have been allowed to pump because they were generally later in priority compared to Colorado surface water rights. In fact, most were installed after the adoption of the Compact. R. vol. 15, at 132-34, Pl. App., Item 19; R. vol. 116, at 69; Pl. App., Item 27.

Second, Colorado sought federal funding for the Trinidad Dam and Reservoir Project, which had been authorized by Congress in 1958, Act of July 3, 1958; Jt. Ex. 35, at 309 (R. vol. 111, at 5, 6), Pl. App., Item 15. In order to obtain the concurrence of Kansas, Colorado agreed to Kansas' demand that the Compact Administration adopt a set of Operating Principles for Trinidad Dam and Reservoir Project ("Operating Principles") (Jt. Ex. 19,

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[3] The "Colorado Doctrine," indeed, was another name for the pure prior appropriation law first enunciated in *Coffin v. Left Hand Ditch Co.*, 6 Colo. 443 (1882); *see* Frank J. Trelease, *Water Law* 10-13, 29 (2d ed. 1974). This is the "first-in-time, first-in-right" legal doctrine governing the allocation of water in most Western states in which water rights are established by application to beneficial use and not by ownership of riparian lands.

June 6, 1967 minutes (R. vol. 17, at 87, 89)), Pl. App., Item 12. The principles had been developed by the U.S. Bureau of Reclamation based on hydrologic studies performed by the Bureau. Rep., vol. III, at 388-89. Once the Compact Administration adopted the Operating Principles, funds were appropriated and the project was built and became operational in 1979. *Id.*, at 395-96. However, as the Master correctly assumed in his report, Colorado violated the Operating Principles within a year after the project began to operate, by storing water that should have flowed downstream to other Colorado and Kansas irrigators. *See* Jt. Ex. 18-32, at 47-48 (R. vol. 20, at 100, vol. 21, at 34, 36), Pl. App. No. 11. The Bureau of Reclamation analyzed the reservoir operations and concluded that what Colorado had done from 1979 through 1984 was "a departure from the intent of the Operating Principles." Jt. Ex. 23, at 55 (R. vol. 17, at 69, R. vol. 18, at 21, 22), Pl. App., Item 13.

Third, in 1976, Colorado initiated the Winter Water Storage Program (WWSP). Rep., vol. II, at 309. The program consists of storing water in Pueblo Reservoir and other off stream reservoirs—water which before 1976 had been diverted onto the fields in Colorado for winter irrigation—and later releasing the stored water to irrigate crops during the summer months. *Id.*, at 308-11.

IV. Procedural History.

After the Court granted Kansas' Motion for Leave to File a Bill of Complaint, Colorado filed its Answer and Counterclaim, denying the allegations of Compact violations and asserting several defenses. Colorado's Counterclaim essentially made two claims: (1) that Kansas had stored water released from John Martin Reservoir in Lake McKinney Reservoir in Kansas in violation of the Compact; and (2) that increased post-Compact pumping in Kansas had depleted the surface water supply in Kansas and had caused Kansas users to make additional demands for releases of water stored in John Martin Reservoir in Colorado, to the detriment of Colorado users. *See* Rep., App., Ex. 3. The United

States intervened and filed an Answer relating to Kansas' Trinidad Reservoir and WWSP claims. *See id.*, at Ex. 4.

Prior to trial, the Master bifurcated the case into a liability phase and a remedies phase. *Id.*, at Ex. 6. Trial before the Master on the liability phase concluded on December 16, 1992. The Master submitted his Report to the Court at the end of July 1994. The Master recommended in the Report that the Court reject the equitable defenses of Colorado, recognize the pre-Compact pumping entitlement of Colorado in the amount of 15,000 acre-feet per year and find a violation of the Arkansas River Compact by the State of Colorado with regard to post-Compact well pumping. Rep., vol. I, at 170, vol. II, at 190-200, 336-37. These recommendations are largely in accord with Kansas' position. The Master recommended, however, that Kansas' usable flow method be rejected and that the other two claims by Kansas (Trinidad and WWSP) be denied. He also recommended that the two Colorado counterclaims (Lake McKinney and post-Compact wells in Kansas) be denied for failure of proof. Rep., vol. II, at 336-37.

During trial, each state presented a hydrologic model showing depletions[4] from post-Compact well pumping and the WWSP on flows at the state line. *Id.*, at 228-90. The depletions calculated by each model were then evaluated to determine the amount of depletions that would have been used in Kansas had they been available. *Id.*, at 291-305. According to Kansas' evidence, the net depletions to usable flow caused by increased Colorado pumping and the WWSP during the period 1950-85 were 489,000 acre-feet. Pl. Ex. 111***[5] (R. vol. 89, at 9, 85, vol. 90, at 5) Rep., App.,

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[4] Depletions are negative effects on river flows. Depletions of usable flow are negative effects on river flows that would have been diverted by canals for irrigation or that would have recharged a groundwater aquifer. Accretions are positive effects on river flows. "Net" depletions are the depletions that remain after offsetting the effects of transmountain water imported to the Arkansas Basin from the Colorado Basin. Depletions of usable flow at the state line mean less water available to Kansas water users, a result the Compact was intended to prevent.

[5] Asterisks indicate revised versions of exhibits.

Ex. 11. The Master's usable flow method would reduce Kansas' claim by 124,000 acre-feet (25%). Rep., vol. II, at 303. Almost all of the difference in the results of the two methods arises in the period 1975-82, when the effects of a major drought were felt in Kansas, with stateline flows severely reduced and no flows at all for long periods at Garden City. Pl. Ex. 698 (R. vol. 127, at 127, 146), Pl. App., Item 5; Rep., vol. I, at 142; R. vol. 109 at 68-69, Pl. App., Item 25.

Kansas also submitted evidence on the violation of the Trinidad Reservoir Operating Principles from 1979 through 1984, based in large part on a 1988 Report of the Bureau of Reclamation.[6] *See* Rep., vol. III, at 409-10. The Bureau found that the Operating Principles had been departed from, and it performed certain computer modeling studies to quantify the effect of the departure from the Operating Principles on John Martin Reservoir. Jt. Ex. 23, at 55 (R. vol. 17, at 69, vol. 18, at 21, 22), Pl. App., Item 13. Before Colorado offered any evidence, the Master dismissed Kansas' claim because Kansas had not submitted evidence comparing actual operations with "no-project" conditions, an analysis that the Bureau had said was impossible. Jt. Ex. 23, at 26 (R. vol. 17, at 69, vol. 18, at 21, 22), Pl. App., Item 13.

On October 3, 1994, the Court received the Report, ordered it filed and set the schedule for exceptions and briefing. Kansas' Exceptions are submitted in accordance with that schedule.

SUMMARY OF ARGUMENT

I. Trinidad Reservoir Operating Principles.

The Master erred in allowing Colorado to disregard the Trinidad Operating Principles with impunity. The Operating Principles were officially adopted by the Compact Administration with the unanimous approval of the compacting states. Such approval was necessary in order for the project to be built. In return for

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[6] Neither state agreed in all respects, however,with the 1988 Bureau Report. *See*, Rep., vol. III, at 378, 396, 403.

this essential approval of the project, Colorado agreed to a method of assessing compliance with Article IV-D of the Compact. The Master's decision deprived Kansas of the benefit of this valid exercise of authority by the Compact Administration, while leaving intact the benefit Colorado received.

This Court has made it clear that unanimous decisions of interstate compact agencies, acting within the scope of their congressionally ratified powers, are binding and that it is improper to use this Court's original jurisdiction to redecide such issues. This Court has enforced such a resolution in the past. *See Texas v. New Mexico*, 462 U.S. 554 (1983). If resolutions of interstate compact agencies have no effect, the compacting states will refuse to adopt cooperative resolutions such as the Trinidad Operating Principles. Moreover, this Court should enforce detailed procedures adopted for the purpose of maintaining the Article IV-D standard.

II. Winter Water Storage Program (WWSP).

The Master decided that there was too much uncertainty in the evidence offered by Kansas to prove its claim regarding Colorado's Winter Water Storage Program. The major cause of such uncertainty was the lack of data which needed to have been collected in the past. The Master effectively placed the risk that there might be such uncertainty on Kansas. However, that is a burden that Kansas cannot possibly satisfy. Rather, the risk that there might be such uncertainty should be on the state that proceeded with the project without either (1) performing sufficient studies and collecting sufficient data to assure compact compliance or (2) agreeing to appropriate limitations necessary to insure compliance with Article IV-D of the Compact, as occurred for the Trinidad Project. That risk should have been placed on Colorado, the state benefitting from the program, not Kansas. Kansas had no way of collecting that data in 1976. It has no way of collecting that data today. The onus of not having collected that data should be on the state benefitting from the development and controlling the collection of the necessary data.

The Master also erred in rejecting the Kansas WWSP claim because he relied on an assumption that accretions might be offset against depletions that Kansas' evidence showed had occurred. Such reliance was incorrect because he found, and it is undisputed, that more evidence was needed to determine whether accretions should be offset against depletions. It was error to reject a claim on an admittedly incomplete record.

III. Usability of Stateline Depletions.

Generally stated, usability is the extent to which river flows (1) were, or would have been divertible at times when water is needed for irrigation or (2) were or could have been recharged to a groundwater aquifer. The method for determining usability adopted by the Master is contrary to Article IV-D of the Compact, which requires that the waters of the Arkansas River shall not be materially depleted in usable quantity or *availability for use* to the water users of Colorado and Kansas. Article IV-D embodies the basic understanding that the usability of waters crossing the state line can vary in time and amount. Therefore, techniques for analyzing usability which do not account for its variability in time and amount should be avoided to the maximum extent possible. The method chosen by the Master clearly does not do that. It averages usability not just over a week or a month, but over the whole study period of 36 years, 1950-85. If a more precise alternative to such an averaging method is available, it should be used to ensure compliance with Article IV-D of the Compact.

There is an alternative to the Master's averaging method. There is a method that recognizes the day-to-day variability of usability, namely, Kansas' usable flow method. Yet the Master rejected Kansas' method. He did so on three grounds, two of which are not related to the averaging method at all, but rather relate to questions of uncertainty that he had with respect to the separate hydrologic modeling. Any problems that he perceived with the hydrologic modeling should not have caused him to reject the better and separate method for determining usability. The third ground is merely Colorado's unproved allegation that post-Compact well

pumping in Kansas has increased usability in Kansas beyond pre-Compact levels. The same evidence is required to support that allegation as was required to support the related Colorado counterclaim, which alleged that well depletions in Kansas had increased usability in Kansas and had caused increased calls for releases from John Martin Reservoir. The Master correctly recommended that that counterclaim be dismissed for failure of proof.

ARGUMENT

I. Colorado Has Violated the Arkansas River Compact by Admittedly Refusing to Abide by the Trinidad Reservoir Operating Principles.[7]

A. History of the Operating Principles.

The Master rejected Kansas' claim that violation of the Compact Administration's duly adopted Trinidad Reservoir Operating Principles constituted a violation of the Compact. Kansas presented evidence showing a violation of the Operating Principles and the resulting depletions to John Martin Reservoir conservation storage, part of which is allocated to Kansas under Article V of the Compact. *See* Pl. Ex. 580 (R. vol. 18, at 18), Pl. App., Item 3; R. vol. 18, at 9-10, 16-17, Pl. App., Item 20. The Master held that the Kansas evidence was insufficient because it did not compare the actual operations to pre-Compact conditions. Rep., vol. III, at 426. Departure from the Operating Principles is *ipso facto* a violation of the Compact, and it was entirely sufficient, for purposes of quantifying the effects of the violation, to compare the actual operation with simulated operation as it should have been under the Operating Principles.

Trinidad Reservoir is located just above the city of Trinidad, Colorado, in the southeastern part of the state near the New Mex-

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[7] This portion of the Brief relates to the Decision Of Special Master On Colorado's Motion To Dismiss Kansas' Trinidad Reservoir Claim. Rep., vol. III, at 373. The Master has requested that this decision be confirmed by the Court. Rep., vol. II, at 336.

ico border. The reservoir is an onstream reservoir on the Purgatoire River, which is the major tributary of the Arkansas River between Pueblo and John Martin Reservoir. The Purgatoire enters the Arkansas just above the reservoir. *See* Rep., vol. I, Map in pocket. When the project was authorized in 1958, it was recognized that operating limitations would have to be placed on the reservoir to insure compliance with the Compact. *See* Jt. Ex. 35, at 309 (R. vol. 111, at 5, 6), Pl. App., Item 15; Jt. Ex. 34, at 3-4, ¶ 97, at 29, ¶ 144, at 40 (R. vol. 17, at 77, 89), Pl. App., Item 14.

The Bureau of Reclamation thereafter undertook studies, completed in 1961 and 1964, on the basis of which it proposed the Operating Principles. Rep., vol. III, at 388-89. The Operating Principles were reviewed and approved by the Corps of Engineers, the Colorado Water Conservation Board and the Purgatoire River Water Conservancy District. In response to previous correspondence, H. P. Dugan, Regional Director of the Bureau of Reclamation, wrote to the Governor of Kansas on February 1, 1967, stating, in part:

> We are pleased to learn that the Kansas Water Resources Board, on the basis of our report on the irrigation function of the proposed Trinidad Project and additional information furnished by our representatives, has concluded essentially that *the proposed Trinidad Project will not materially deplete the water supply of the Purgatoire River and John Martin Reservoir providing the project is operated in strict conformity with the guidelines used in the Trinidad Project investigations and the "Operating Principles"* contained in the Bureau's Trinidad Irrigation Report.
> *We wish to assure you that the Bureau of Reclamation* in its planning investigations for the proposed Trinidad Project and in developing the "Operating Principles" therefor has been fully aware of and *has diligently and conscientiously endeavored to implement the provisions*

> *of the Arkansas River Compact* so that the interests of the State of Kansas at all times will be fully protected consistent with the provisions of the Arkansas River Compact. Jt. Ex. 44, at 1 (R. vol. 17, at 82, 89), Pl. App., Item 16. (Emphasis added.)

The Governor of Kansas subsequently requested that the Operating Principles be adopted by the Arkansas River Compact Administration. Jt. Ex. 45 (R. vol. 17, at 86, 89), Pl. App., Item 17. This was done by unanimous consent on June 6, 1967. *See* Jt. Ex. 19, June 6, 1967 minutes (R. vol. 17, at 87, 89), Pl. App., Item 12. The Operating Principles were thereby promulgated as an official action of the Compact Administration in furtherance of its mandate to implement the Arkansas River Compact. Colorado agreed to the Operating Principles in the forum provided by the Compact Administration. *See id.*; Jt. Ex. 99, at 1-2 (R. vol. 94, at 24; Admitted by Written Order of 11/16/93), Pl. App., Item 18.

Upon the Compact Administration's approval of the Operating Principles, Congress enacted legislation to provide funding, and the project was built. Rep., vol. III, at 394-95. At the first opportunity to store more water than was allowed by the Operating Principles, however, Colorado permitted the Trinidad Project to do so. Specifically, the water retained in the reservoir from 1979 was not counted against the water stored in 1980 as it should have been, resulting in the storage of water in 1980 that should have been allowed to flow downstream to other users, including Kansas users (a process known as "rollover"). Kansas immediately asserted before the Compact Administration that Colorado had violated the Compact. *See* Jt. Ex. 18-32, at 47-48 (R. vol. 20, at 100, vol. 21, at 34, 36), Pl. App., Item 11. Also, Colorado permitted the storage of winter flows in the reservoir outside the reservoir storage right, with the same effect that water was stored which should have been passed to downstream users, including Kansas users. *See* R. vol. 18, at 9-10, Pl. App., Item 20. Kansas' assertion that these actions violated the Operating Principles was

accepted by the Master for purposes of Colorado's Motion to Dismiss (Rep., vol. III, at 378), which is consistent with the conclusions of the Bureau of Reclamation that rollover and the unauthorized storage of winter water each constitute "a departure from the intent of the Operating Principles." Jt. Ex. 23, at 55 (R. vol. 17, at 69, vol. 18, at 21, 22), Pl. App., Item 13. The Bureau determined that Colorado's failure to abide by the intent of the Operating Principles resulted in average annual depletions of inflows into John Martin Reservoir totalling 11,600 acre-feet for the period 1979-84. *Id.*, at Table 4, Pl. App., Item 13. The Kansas evidence, based on monthly depletions rather than annual averages, showed such depletions to be as high as 27,500 acre-feet for the period 1979-84.[8] Pl. Ex. 580 (R. vol. 18, at 18), Pl. App., Item 3.

B. This Court Should Honor a Unanimous Decision of the Arkansas River Compact Administration.

The Master has accepted Colorado's argument that official action of the Arkansas River Compact Administration is not effective to set procedures for operation of Trinidad Reservoir necessary to comply with the Compact. It was the Master's position that Kansas cannot rely on the official action of the Compact Administration in adopting the Operating Principles but must prove anew in this Court that operation of Trinidad Project in violation of the Operating Principles caused stateline flows to be materially depleted in usable quantity or availability for use. The Master's position requires that the original jurisdiction of this Court be burdened by trial and proof on an issue already decided by the Arkansas River Compact Administration, a body created by the Arkansas River Compact and empowered to implement that Compact.

In *Texas v. New Mexico*, 462 U.S. 554 (1983), this Court addressed a similar question with regard to the Pecos River Com-

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[8] Kansas generally received 40% of inflows to John Martin Reservoir during the study period. *See* Rep. vol. I, at 47.

pact (Act of June 9, 1949, ch. 184, 63 Stat. 159) and the relationship between the Pecos River Commission and this Court. The Court described the Pecos River Commission as follows:

> The Compact also established the Pecos River Commission as a permanent body, in more or less the same form that it had during the negotiations on the Compact. It was to have three Commissioners, one from each State and one representing the United States, but the United States representative could not vote. Art. V(a). Accordingly, the Commission could take official action only with the concurrence of both state Commissioners. The Commission was given broad powers to make all findings of fact necessary to administer the Compact, Arts. V(d)(5)-(10), as well as to "[e]ngage in studies of water supplies of the Pecos River" and to "[c]ollect, analyze, correlate, preserve and report on data as to the stream flows, storage, diversions, salvage, and use of the waters of the Pecos River and its tributaries," Arts. V(d)(3), (4). 462 U.S., at 560.

The Arkansas River Compact Administration is almost identical to the Pecos River Commission. The Arkansas River Compact Administration is also a permanent body established by the Arkansas River Compact in more or less the same form that the Arkansas River Compact Commission had during the negotiations on the Compact. *See* Compact Preamble, Art. VIII, Rep., App., Ex. 1, at App. 1, 11-15. Instead of one commissioner from each state and one representative of the United States, each state has three representatives, and there is one federal representative. *Id.*, at App. 12. However, exactly like the Pecos River Compact Commission, each state has but one vote, and the federal representative cannot vote. *Id.* The Compact Administration can take official action only with the concurrence of both states. *Id.* The Compact Administration may make findings of fact, although, just like the Pecos River Commission, such findings "shall not be con-

clusive in any court, or before any agency or tribunal but shall constitute prima facie evidence of the facts found." *Id.*, at App. 15; Pecos River Compact, Art. V(f), 63 Stat. at 163. Also like the Pecos River Commission, the Compact Administration is authorized to engage "in the systematic determination and correlation of the facts as to the flow and diversion of the waters of the Arkansas River" and "the procurement, interchange, compilation and publication of all factual data bearing upon the administration of this Compact. . . ." Compact Art. VIII-G, Rep., App., Ex.1, at App. 14.

The Court described New Mexico's contention with respect to the relationship of this Court to the Pecos River Commission as follows:

> It contends that this Court may do nothing more than review official actions of the Pecos River Commission, on the deferential model of judicial review of administrative action by a federal agency, and that this case should be dismissed if we find either that there is no Commission action to review or that the actions the Commission has taken were not arbitrary or capricious. Thus, in New Mexico's view, this suit may be maintained only as one for judicial review of the Commission's quantification of the 1950-1961 shortfall,[9] and the implied acceptance of the Review of Basic Data which, New Mexico argues, that entailed. According to New Mexico, "[this] Court has no authority to act *de novo*

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[9] This language refutes the Master's assertion in the case now at bar that "the Court did nothing more than go along with a unanimous finding of the Commission as to river flow depletions for certain years." Rep., vol. III, at 420-21. That the Commission's quantification was a contested issue is further borne out by one of New Mexico's "Questions Presented" in that case: "Whether the Court should review findings of fact the Commission made in 1962 . . . ." New Mexico's Brief in Support of Exceptions at i (Dec. 2, 1982), *Texas v. New Mexico*, 462 U.S. 554 (1983) (No. 65, Original), Pl. App., Item 30.

> or assume the powers of the Pecos River Commission." . . . We disagree. 462 U.S. at 566-67 (footnote added).

In the course of its emphatic response to New Mexico's position, the Court stated the following:

> Considerations outside the Compact itself also render New Mexico's theory of the role of this Court untenable. According to New Mexico, Texas may seek judicial review in this Court of decisions actually made by the Commission—presumably on the votes of both State's Commissioners. That is not the proper function of our original jurisdiction to decide controversies between two States. In recent years, we have consistently interpreted 28 U.S.C. § 1251(a) as providing us with substantial discretion to make case-by-case judgments as to the practical necessity of an original forum in this Court for particular disputes within our constitutional original jurisdiction. . . . . We exercise that discretion with an eye to promoting the most effective functioning of this Court within the overall federal system . . . . *If authorized representatives of the compacting States have reached an agreement within the scope of their congressionally ratified powers, recourse to this Court when one State has second thoughts is hardly "necessary for the State's protection," Massachusetts v. Missouri*, 308 U.S. 1, 18 (1939). Absent extraordinary cause, we shall not review the Pecos River Commission's actions without a more precise mandate from Congress than either the Compact or 28 U.S.C. § 1251 provides. 462 U.S. 554, 570-71 (1983) (emphasis added; footnote and citations omitted).

In a footnote to this passage, the Court said, in part:

> *When it is able to act, the Commission is a completely adequate means for vindicating either State's interests.* The need for burdensome original jurisdiction litigation, which prevents this Court from attending to its appellate docket, would seem slight. *Id.* at 571 n. 18 (emphasis added).

Here, the authorized representatives of the compacting states (the Colorado and Kansas Compact Administration members) have reached an agreement (the Operating Principles) within the scope of their congressionally ratified powers (to implement and prescribe procedures under Article VIII-B). Therefore, recourse to this Court by Colorado is hardly necessary for Colorado's protection. In this action, Colorado has not requested that the Court review the action of the Compact Administration adopting the Operating Principles, let alone shown "extraordinary cause" for granting such a request. Further, the Court has held that when the Compact Administration is able to act, as occurred in its adoption of the Operating Principles, the Administration is a completely adequate means for vindicating Colorado's interest, and resort to this Court's original jurisdiction on the subject of the agreement, namely, the Operating Principles, is not needed.

Article VIII-A of the Compact creates the Compact Administration and Article VIII-B empowers the Compact Administration to adopt regulations, prescribe procedures and perform all functions required to implement the Compact. Article VIII also provides for the membership of the Compact Administration: water right owners from specified areas within the basin and the chief water officials of each state. In addition, considerable expertise is made available to the Administration through the water agencies of the two states and the federal government. The Compact Administration is clearly invested with considerable access to technical expertise in making decisions such as the one it made on June 6, 1967, when it adopted the Operating Principles.

The Master decided that "the Compact Administration did not do, nor intend to do, what Kansas now claims." Rep., vol. III, at

414. He further stated, "I find nothing to indicate that the Compact representatives of either State thought they were exercising binding authority under Article VIII-B." *Id.*, at 415. The Master appears to rest this conclusion on the fact that the Bureau of Reclamation was the body which developed the Operating Principles and that the Operating Principles had been widely accepted by other parties prior to being voted on by the Compact Administration. *See id.*, at 414. He also seems to have based it on the approval of the Governor of Kansas subject to the acceptance of the Operating Principles by the Compact Administration, and the fact that the primary subject of discussion at the meeting at which they were adopted was the set of additional conditions requested by Kansas. *Id.*, at 414-15. These are odd grounds to cite as a basis for determining the intentions behind governmental action. The primary source for determining the Compact Administration's intent should be the terms of the promulgation itself. *See, e.g., Negonsott v. Samuels*, 113 S. Ct. 1119, 1122-23 (1993), *Reeves v. Ernst & Young*, 113 S. Ct. 1163, 1169 (1993).

The Operating Principles themselves refute the Master's conclusion. The first sentence of the document provides as follows:

> The Trinidad Dam and Reservoir Project as reported in House Document No. 325, 84th Congress, 2d Session, and as authorized by the Flood Control Act of 1958, will be operated in such a manner as to secure the greatest practicable benefits from the regulation and use of the flows of the Purgatoire River consistent with the laws and policies of the State of Colorado and of the United States including the Arkansas River Compact. Jt. Ex. 19, June 6, 1967 minutes (R. vol. 17, 87, 89), Pl. App., Item 12, at A-52 to -53.

These are clearly mandatory words—"The Project . . . will be operated in such a manner. . . ." These are not words of mere courtesy or advice. These words show an intent on the part of the governmental body adopting them that they are mandatory

and expected to be enforceable. The substantive provisions are expressed in the same imperative language. For example, Article III on Flood Control provides, in pertinent part, as follows:

> Trinidad Reservoir shall be operated for flood control benefits in accordance with regulations prescribed by the Secretary of the Army and the following operating principles:
>
> 1. All potentially damaging flood inflows shall . . . .
> 2. All flood waters stored in the flood control capacity shall . . . .
> 3. Any inflow, other than that stored for irrigation use, temporarily retained below the bottom of the flood control capacity for flood control purposes shall . . . . *Id.*, at A-56 (emphasis deleted).

Article IV-Irrigation is no less mandatory:

> Administration of the irrigation capacity in Trinidad Reservoir and the distribution of water to the District Irrigable Area will be made by the District in accordance with House Document No. 325, 84th Congress, 2d Session, and these operating principles. . . .
>
> A. . . .
>
> 1. The water users within the District shall assign . . . .
>
> 2. Waters of the Purgatoire River shall be stored . . . .
>
> B. . . .
>
> 1. The acreage irrigated by the District water supply shall be limited . . . .
> 2. All water deliveries to the 19,717 acres of the District irrigable area will be limited . . . .

> 3. No water deliveries for irrigation of the 19,717 acres of the District irrigable area will be made . . . . *Id.*, at A-56 to -59 (emphasis deleted).

This listing of mandatory terms could be continued through every operative provision of the Operating Principles. Thus, the strongest evidence, the document itself, consists entirely of terms that are not merely directory or advisory, but mandatory, showing a self-conscious exercise of binding authority by the Compact Administration.

The sources to which the Master resorted to support his conclusion are unpersuasive. The fact that the wording was not generated within the Compact Administration itself is not persuasive. Governmental entities borrow language from documents and enactments generated by other governmental bodies. The sharing of such ideas is common in the federal system. The rules of civil procedure of the federal and state judiciaries are an immediate example. The enactment of uniform laws among the states is a manifestation of another kind of intergovernmental sharing of statutory provisions. No one suggests that the promulgation of such provisions is any less binding because of the source of the language in those provisions. Nor are they denigrated on the basis that other governmental entities have accepted those same provisions.

The Master also refers to the "prior" approval of the Governor of Kansas. However, it is clear that the approval of the Governor of Kansas was contingent upon the acceptance of the Operating Principles by the Compact Administration. *See* Jt. Ex. 45 (R. vol. 17, at 86, 89), Pl. App., Item 17. If the adoption of the Operating Principles by the Compact Administration was a useless act as the Master suggested, there would have been no reason for the Governor of Kansas to insist upon that act. Prior approval by other governmental entities would not be expected to deprive a subsequently acting governmental entity of the intent expressed in the enactment itself.

The Master also seemed to take comfort from his assertion that the primary subject of discussion at the Compact Administration meeting at which the Operating Principles were adopted was the inclusion of the five additional Kansas conditions. This is contrary, however, to the suggestion of the chief Colorado representative on the Compact Administration when he introduced the issue: "Mr. Sparks was asked to present the Trinidad Project for consideration. He said the project had been before the Administration for a long time and he asked if Kansas had any further questions on the project." Jt. Ex. 19, June 6, 1967 minutes (R. vol. 17, at 87, 89), Pl. App., Item 12, at A-50. The fact that the project had been before the Administration for a long time belies the Master's suggestion that the only thing of interest to the Administration was the set of additional Kansas conditions. Those were simply the last addition to the Operating Principles and therefore a natural subject of discussion. The reference to the possibility of "further questions" from Kansas also suggests previous discussions, whether on or off the record, concerning the project. Indeed, the issue of the Trinidad Project, operating principles and the appropriate form of Commission action had been before the Compact Administration for many years. *See* Rep., vol. III, at 386-87; Jt. Ex. 34, ¶ 144, at 40 (R. vol. 17, at 77, 89), Pl. App., Item 14.

This Court drew a strong distinction in *Texas v. New Mexico* between review of a compact commission's decision where there had been affirmative and unanimous action by the commission and the absence of commission action. *See* 462 U.S. at 566-71. The Court continued this distinction more recently in *Oklahoma v. New Mexico*, 501 U.S. 221 (1991). There the Court rejected a Master's recommendation to remand to the Canadian River Commission a question which had not already been determined by a unanimous decision of the commission. The Court rejected the recommendation saying that "this Court must pass upon every question essential" to a determination of a controversy between the states. 501 U.S. at 241. Here, however, adoption of the Trinidad Reservoir Operating Principles constitutes a prior and unan-

imous decision of the Compact Administration, so the very predicate of the Court's ruling in *Oklahoma v. New Mexico* is lacking.

C. Kansas and Other States Need To Be Able To Rely on Unanimous Actions of Interstate Compact Agencies.

The question involved here is one of principle that will determine for the indefinite future whether Kansas can rely on resolutions of the Arkansas River Compact Administration relating to details of compliance with the Arkansas River Compact. The direction that Kansas receives from the Court will also serve as a guide to other states and other interstate compact commissions and administrations.

The language of the Compact indicates that the states generally should implement the Compact through joint action of the Arkansas River Compact Administration. *See* Compact Art. VIII, Rep., App., Ex. 1, at App. 11-15. Certainly there is no indication that violations could be shown and resolved only by resort to the original jurisdiction of this Court.

As a practical matter, if the compacting states cannot rely on unanimous resolutions of the interstate compact agency charged with implementing a compact, such as resolutions setting standards for operation of new facilities to insure compliance with a compact, the willingness of compacting states to agree to such resolutions will be reduced. As the Master recognized, this federal project would not have been funded by Congress absent the concurrence of Kansas. Rep., vol. III, at 431. Moreover, the U.S. Bureau of Reclamation assured Kansas that the Operating Principles would implement the Arkansas River Compact and would be strictly complied with. *See* Jt. Ex. 44, at 1 (R. vol. 17, at 82, 89), Pl. App., Item 16. In order for useful projects to be considered in the future, therefore, at least where they involve federal resources or property, the concurrence of the downstream state is necessary. If such cooperation is to be forthcoming, the downstream state will need to be able to rely on commitments by the upstream state. The Master's decision would thwart that process.

D. Enforcement of the Operating Principles Will Not Modify the Compact.

An interstate compact adopted under Article I, Section 10, Clause 3 of the United States Constitution cannot be changed by the interstate agency created by the compact. *See, e.g., Texas v. New Mexico*, 462 U.S. 554, 564-65 (1983). The Master's primary concern in denying the Kansas claim was that the Compact not be altered through the actions of the Compact Administration. *See* Rep., vol. III, at 421.

The Master's concern is unjustified. The Operating Principles were proposed by the U.S. Bureau of Reclamation and adopted by the Arkansas River Compact Administration in the belief that they were necessary to implement and prevent violation of the Arkansas River Compact, particularly Article IV D. *See* Jt. Ex. 44, at 1 (R. vol. 17, at 82, 89), Pl. App., Item 16. The Master agreed that the Operating Principles were expected to provide protection against material depletion of usable flow under Article IV-D. Rep., vol. III, at 425-26. Far from altering the Compact, the Operating Principles carry out the intent of the Compact and ensure compliance with it.

The Master assumed that enforcement of the Operating Principles would bestow benefits on Kansas, contrary to the purposes of the Trinidad Project. Rep., vol. III, at 424-25. The only evidence, however, that might be thought to support such a conclusion was the 1988 study by the Bureau of Reclamation of the 1925-57 period. *See* Rep., vol. III, at 401; Jt. Ex. 23, at 28-29 (R. vol. 17, at 69, R. vol. 18, at 21, 22), Pl. App., Item 13. The Bureau itself never drew such a conclusion. The 1925-57 period is not the period of operation (1979-84). When Colorado analyzed the Winter Water Storage Program by similarly analyzing a period when the Program was not in operation, the Master rejected the evidence. *See* Rep., vol. II, at 317-18. There the Master recognized that the period of analysis can make a significant difference in the effect of the program because of differing hydrologic and

institutional conditions. *See* Rep., vol. II, at 318.[10] The same conclusion is applicable to selection of a suitable study period to analyze the Operating Principles. The suitable period is obviously the only period of operation, 1979-84. No such analysis has been performed. Therefore, the Master's conclusion is of doubtful validity.

II. Colorado's Winter Water Storage Program Has Violated the Arkansas River Compact.

A. Introduction.

The Master recommended that Kansas' WWSP claim be denied because (1) it is too uncertain and (2) accretions might offset depletions. Rep., vol. II, at 329-35. For several reasons, the WWSP claim should not be rejected. The Kansas experts determined there was a violation in the amount of 40,000 acre-feet of depletions to usable flow during the operation of the program (1976-85). Pl. Ex. 111''' (R. vol. 89, at 9, 85, vol. 99, at 5), Rep., App., Ex. 11. No other evidence of depletions or lack thereof was submitted for the 1976-85 period of operation. Colorado analyzed a different period, when the program was not operating. Rep., vol. II, at 317. Yet even with several favorable assumptions, Colorado also found depletions of total flow, in excess of 9,000 acre-

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[10] The Master sought to justify his use of averages to assess the Bureau of Reclamation's study results on the basis that Kansas did not object to the use of averages to evaluate the 1961-64 Bureau of Reclamation studies. Rep., vol. III, at 426-28. On the one hand, he said that Colorado is not bound by the Operating Principles; on the other, he said that Kansas is bound by references to averages that do not even appear in the Operating Principles. *See id.*; Operating Principles, Pl. App., Item 19. Moreover, there is little logic in the Master's position that use of averages to determine whether to adopt the Operating Principles dictates that departures from the Operating Principles should also be quantified using averages, especially in light of the denigration of averages in *Colorado v. Kansas*, 320 U.S. 383, 396-97 (1943) and the emphasis in Article IV-D on "availability for use."

feet. *Id.*, at 318. The Master rejected the evidence of depletions, however, holding that the results are too uncertain, placing the onus of uncertainty on Kansas, yet it was Colorado that obtained the benefits of the WWSP; it was Colorado that unilaterally initiated the WWSP without the benefit of prior sufficient studies and data collection now found necessary by the Master. Rep. vol. II, at 334-35. Kansas should not be penalized for a situation created by Colorado and from which only Colorado received benefits.

The Winter Water Storage Program has been operating in Colorado since 1976, a period of approximately 18 years. *Id.*, at 309. The period of operation for which evidence is before the Court is 1976-85 (except 1978—a year in which the program did not operate). *Id.* Common sense leads to the conclusion that putting water on the fields in the heat of summer results in more evaporation and other losses than irrigating fields without crops in the cold of winter. Indeed, the hydrologic modeling performed both by Kansas and Colorado shows that the WWSP causes depletions under widely varying hydrologic conditions. *See id.*, at 316, 318. The Kansas evidence indicates that during the nine years of the WWSP's operation, the program caused depletions at the state line of 53,000 acre-feet, of which 40,000 were usable under-Kansas' usable flow method. Pl. Ex. 111*** (R. vol. 89, at 9, 85, vol. 99, at 5), Rep. App., Ex. 11.[11] Colorado, simulating the WWSP in that part of the study period in which the WWSP did not operate (1950-75 and 1978), also found depletions, as described below. The United States took two positions. *See* Rep., vol. II, at 318-22. The Bureau of Reclamation official called by the United States testified that he believed the program did comply with the Compact. Rep., vol. II, at 320-21. On the other hand, the expert witnesses called by the United States took the position

[11] Under the usable flow method accepted by the Master, the corresponding usable depletions for the period 1976-85 are 27,000 acre-feet. Rep., vol. II, at 316 n.134.

that it was impossible to determine whether or not the program complied with the Compact. *See* Rep., App., Ex. 9, at App. 103.

Given this state of the evidence, the Master attempted to apply the preponderance of the evidence test. Rep., vol. II, at 335. In effect, he said that it was more likely than not that there were no material depletions of usable flow as a result of the WWSP. Despite sizeable depletions determined by the Kansas model (53,000 acre-feet) and smaller but not immaterial depletions under different hydrologic conditions determined by the Colorado model, the Master in effect found it was still more likely that there were no depletions at all. This is an inherently implausible result.

B. The Master Erred in Placing the Risk of Uncertainty Resulting From Lack of Data on Kansas.

With regard to the WWSP, the Master concluded "that the depletions shown by the Kansas model are well within the model's range of error." Rep. at 334-35. The Master mistakenly assumed that this fact rendered the claim negligible. The depletions calculated by the Kansas model caused by the Colorado Winter Water Storage Program are 53,000 acre-feet. Pl. Ex. 111*** (R. vol. 89, at 9, 85, vol. 99, at 5); Rep., App., Ex. 11, at App. 118. The range of error associated with the figure 53,000 acre-feet is very difficult to quantify, and no one has attempted to do so.[12] R. vol. 127 at 117-19, Pl. App., Item 28. During cross-examination, the lead Kansas expert was asked to estimate the range of error. He estimated it to be less than ± 50%. R. vol. 128, at 107-08, Pl. App., Item 29. If it were as much as ± 50%, the range of error would be 53,000 ± 26,500 acre-feet. A depletion of 26,500 is

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[12] The uncertainty quantified in the Report is not the uncertainty of calculated depletions. The Report quotes evidence of uncertainty in the prediction of stateline flows, a very different quantity. Rep., vol. II, at 323-25; R. vol. 127, at 117-19, Pl. App., Item 28. It amounts to a precise answer to the wrong question. The evidence simply does not support the finding that 53,000 acre-feet is within the uncertainty of the model.

certainly material, and 79,500 acre-feet is obviously even more so.[13]

None of the experts deny that there is uncertainty with respect to the modeling results of either state. Much of the source of the uncertainty in the WWSP analysis is the lack of adequate data. R. vol. 127, at 118-19, Pl. App., Item 28. The risk of the lack of adequate data should be borne by the state that initiates and benefits from post-Compact development without collecting the data within its jurisdiction or doing the studies needed to support a good faith belief that the development will comply with the Compact.

The Master effectively held in favor of Colorado, the upstream state that initiated the WWSP without sufficient studies, the state that benefitted from this development, and the state that had effective control over the collection of data. He placed the risk of uncertainty in the modeling results, which was caused by the lack of data, squarely on Kansas, the downstream state. *See* Rep., vol. II, at 329-35. Yet Colorado proceeded with the WWSP without collecting the data or doing the studies needed to support a good faith belief that this development would comply with the Compact.[14] And Colorado, as a practical matter, has had control over (1) existing data in Colorado and (2) the determination whether to collect additional data that may be needed. Colorado literally controls the amount of data available. It is sovereign within its borders, and while the Arkansas River Compact allows for cooperative gathering of data relevant to the Compact (*see* Art. VIII), no Administration action can be taken without the concurrence of Colorado. *See id.*

Kansas has presented evidence based on the best data available. Rep., vol. II, at 250. It has relied upon some of the best experts available (*Id.*, at 232), yet because of Colorado's lack of data collection during the study period, Kansas has been blocked by the

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[13] These values would be reduced to usable amounts by the appropriate usable flow method.

[14] Cf. Rep., vol. II, at 321-22..

Master on the basis that there is too much uncertainty in its evidence.

This Court recommended in *Colorado v. Kansas* and other equitable apportionment cases that the states solve their differences by compact. It is not consistent with that policy to allow one state to take unilateral action to the detriment of the other compacting state. To allow Colorado to fail to collect data, to "hide in the noise" of the existing and inadequate data (*see* Rep., App., Ex. 9, at App. 103), to initiate and to benefit from, a post-Compact development, and then to deny Kansas protection under the Compact because modeling results are made uncertain by the same lack of data, emasculates Article IV-D of the Compact. Such a ruling encourages states to initiate post-Compact developments without definitively testing compact compliance and discourages the collection of data that would help determine compact compliance.

The placement of the burden of proof is a matter of public policy and substantive law. *American Dredging Co. v. Miller*, 114 S. Ct. 981, 988 (1994). The public policy in this case should not reward the state that proceeds without adequate prior studies, that benefits from the project and that controls the data necessary for the determination of compact compliance by placing the whole burden on the downstream state. Rather, even if the ultimate burden of persuasion is on the plaintiff state, it would be fundamentally unfair also to place on the plaintiff state the burden of production of data from the defendant state.

Colorado also independently analyzed the WWSP claim with its hydrologic model, and it also found depletions. Rep., vol. II, at 318. Although it analyzed the wrong period, namely the period during which the WWSP was not operating, it found during that period that the WWSP would have caused depletions in excess of 9,000 acre-feet. *Id.*[15] And this is in spite of the fact that it made important assumptions in its own favor.[16] Thus, both Kansas

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[15] The 9,000 acre-foot figure represents simple depletions at the state line as opposed to usable depletions. *Id.*

[16] Colorado assumed (1) no effect from the WWSP between Pueblo

and Colorado have determined that the Winter Water Storage Program creates depletions not only when analyzed for the period in which it actually operated but also hypothetically in the other years of the study period in which it did not operate. Common sense and all available evidence indicate that the WWSP causes depletions.

In *Commercial Molasses Corp. v. New York Tank Barge Corp.*, 314 U.S. 104, 111 (1941), this Court noted that the burden of proof, which is synonymous with the burden of persuasion, is usually placed on the party with the better opportunity to know the fact in issue. While *Commercial Molasses* involved a bailment, the principle is not confined to that area of law. *See* 9 John H. Wigmore, *Evidence* §§ 2487-89 (Chadbourn rev. 1981). Here the Master's rejection of Kansas' WWSP claim places on Kansas not only the burden of persuasion but also the burden of coming forward with evidence.[17] The Master's approach ignored the fact that the data were accessible to Colorado, but not to Kansas. In comparable circumstances, the law has placed the burden of coming forward with evidence on the party with access to data. *See e.g., Ybarra v. Spangard*, 25 Cal.2d 486, 154 P.2d 687, 689 (1944). As this Court has noted: "The ordinary rule, based on considerations of fairness, does not place the burden upon a litigant of establishing facts peculiarly within the knowledge of his adversary." *United States v. New York, N.H. & H. R.R.*, 355 U.S. 253, 256 n.5 (1957). The concepts of fairness noted in these cases

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and Las Animas, a stretch of more than 100 river miles in the heart of the WWSP area, *id.*, at 317, n. 136, vol. I, Map in pocket; (2) accretions can be offset by Colorado against depletions no matter when they occur during the 27-year period, *see* Def. Ex. 134*, at 8.1 (R. vol. 83, at 71, vol. 86, at 160, vol. 115, at 97), Pl. App., Item 6; and (3) high winter evaporation, which tends to minimize the difference between winter and summer evaporation, and thus the calculated effect of the WWSP. *See* Rep., vol. II, at 317 n. 136.

[17] For the most recent discussion of the difference between these burdens, see *Office of Workers' Compensation Programs v. Greenwich Collieries*, 114 S.Ct. 2251, 2255-56 (1994).

compel the conclusion that, when all available data indicate depletions, the state that has control over data and that initiates a program should be the state that bears the burden of producing evidence to reduce uncertainty. The Master not only required Kansas to present a prima facie case but also relieved Colorado of the burden of coming forward with evidence to reduce assumed uncertainty in the Kansas evidence of depletions. He placed the burden of reducing uncertainty on Kansas, the party least able to carry that burden. This Court should reject that approach.

Here, the uncertainty perceived by the Master is the only bar to Kansas' satisfying its burden, other than the possibility of offsetting by accretions, discussed below. The Kansas model calculated depletions of 53,000 acre-feet, which the Kansas experts testified was their best estimate given the data limitations. Rep., vol. II, at 250; Pl. Ex. 111[***] (R. vol. 89, at 9, 85, vol. 99, at 5), Rep. App., Ex. 11; R. vol. 127, at 118-19, Pl. App., Item 28. Even the attempts by the Colorado expert to alter the Kansas model to eliminate calculated depletions did not succeed. *See* Def. Ex. 1011, Comparison 4 (R. vol 133, at 61, vol. 139 at 44, 83), Pl. App., Item 7; Def. Ex. 1012, Comparison 4 (R. vol. 138, at 65, vol. 139, at 44, 83), Pl. App., Item 8.[18]

When the evidence presented by the two states is fully considered, together with the results of the work by the Colorado expert to alter the Kansas model more to his liking, it is striking that WWSP depletions just will not go away. Neither will the uncertainty in the exact quantification go away. Kansas is entitled to protection under the Compact. Any uncertainty it could do nothing about and which resulted from the unilateral action of Colorado only increases the need for protection.

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[18] The Colorado expert did not propose his results as independently reliable quantifications of depletions caused by the WWSP, but only as preferable in his opinion if the Kansas model were accepted. Rep., vol. II, at 288-89.

C. The Master Relied on a Basis as to Which the Record Was Admittedly Incomplete.

The Master based his decision to reject Kansas' Winter Water Storage Program claim on the proposition that if accretions were taken into account, then depletions would be essentially eliminated.[19] Rep., vol. II, at 335. The Master should not have relied on evidence of accretions to defeat Kansas' WWSP claim. Earlier in his Report, he examined the question of accretions and determined that the "issue needs to be examined." Rep., vol. II, at 263. He went on to say, "[I]f my conclusion on liability is confirmed by the Supreme Court, then, to refine the total amount of depletions, additional evidence will be required during the remedies phase of the trial." *Id.* Nevertheless, when the Master arrived at the question of whether the evidence showed that Colorado violated the Compact by operation of the WWSP, without waiting for the evidence that he had indicated was necessary, he rejected the Kansas claim in part on the basis of accretions. *See* Rep., vol. II, at 335. This is inconsistent with simple fairness; it is inconsistent with the precedents of this Court and it is inconsistent with the need the Master expressed for further evidence on accretions. At the very least,[20] the conclusion as to whether Kansas established its WWSP claim should have awaited a determination of the status of accretions. The Master himself stated:

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[19] "Accretions" are calculated increases in monthly stateline flows from the amount of water that would have flowed across the stateline absent the institutional change in Colorado.

[20] Kansas contends that offsetting monthly accretions against monthly depletions is contrary to the Article IV-D proviso that the waters of the river "not be materially depleted in usable quantity or availability for use . . . ." There is no evidence that would support the Master's suggestion that accretions can be used to offset the depletions forbidden by Article IV-D. Unlike the Rio Grande Compact of ten years earlier, Act of May 31, 1939, ch. 155, 53 Stat. 785, the Arkansas River Compact contains no provision for debits and credits. Cf. *id.*, at Art. VI. The Master reserved his ruling on this issue. Rep., vol. II, at 263.

> Kansas properly seeks protection against an averaging process that would allow depletions to be offset by later accretions that might not be usable because of amount or timing, or might simply come too late to compensate for earlier injury. Article IV-D of the compact addresses not only quantity but also protects the "availability for use" of Stateline flows. Rep., vol. II, at 262.

It is inconsistent with his stated position on the propriety of protecting Kansas from having accretions offset against depletions in other months, as stated above, to rely on the calculation of accretions to defeat the Kansas WWSP claim. The Master stated that "depletions are essentially eliminated if accretions are taken into account." Rep., vol. II, at 335. It is erroneous to rely on accretions when the Master has stated that additional evidence is necessary in order to determine when accretions may be offset against depletions, if at all, and when they may not.

The Master's reliance on accretions to defeat the Kansas WWSP claim is inconsistent with this Court's holding in *United States v. Texas*, 339 U.S. 707 (1950). In that case, there was no dissent from the following statement in the majority opinion: "The Court in original actions, passing as it does on controversies between sovereigns which involve issues of high public importance, has always been liberal in allowing full development of the facts." 339 U.S. at 715. Here we have a situation in which the Master has declared in no uncertain terms that more evidence is needed on remand with regard to the status of accretions. In the same Report, however, he seeks to support his final conclusion with respect to the Kansas WWSP claim by relying on the very same accretions. Such reliance would not be appropriate in the normal case, and it is even less appropriate in a case between sovereigns where this Court has specifically indicated the need for full development of the facts before making a decision.

III. Kansas' Method for Determining the Usability of Depletions is the Only Proposed Method Consistent With the Compact.

A. Introduction.

Article IV-D of the Compact prohibits material depletions "in usable quantity or availability for use." Thus, depletions from post-Compact developments calculated by the experts of the parties must be analyzed to determine how much of the depletions are usable. The foregoing language of Article IV-D, understood with the help of the prior decision of this Court, requires a daily analysis of usability if at all possible. Yet the Master chose the opposite — a usability analysis which depends on long-term averages and pays no heed to the availability-for-use criterion. Moreover, because of the hydrologic conditions present during one part (1975-82) of the study period (1950-85), the method chosen by the Master underestimates usable depletions to Kansas water users by 124,000 acre-feet. *See* Rep., vol. II, at 303; Pl. Ex. 698[21] (R. vol. 127, at 127, 146), Pl. App., Item 5.

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[21] Plaintiff's Exhibit 698 is Item 5 in the Appendix. This bar graph is a comparison of the two methods for determining usability under discussion. In red is shown the method proposed by Kansas (SWE method). In purple is shown the method adopted by the Master (HCI method with Larson coefficients). This graph shows *cumulative* usable stateline depletions. Thus, the amount shown for each year is not the amount of usable depletions in that year by each method. Rather, the amount shown for each year is the accumulated usable depletions from the beginning of the study period in 1950 up to that year, all added together. The graph shows that the methods are quite comparable until about 1975, when they begin to diverge, the red bars representing the method proposed by Kansas increasing at a higher rate than the purple bars representing the method adopted by the Master. However, the cumulative difference between the two methods stops changing in 1982. In other words, the difference that has been built up between 1975 and 1982 is not increased further in the later years. That difference simply remains constant, which means that the two methods are calculating comparable amounts of usable depletions in each of those later years.

Kansas proposed the most appropriate method for determining the usability of depletions caused by post-Compact developments in Colorado. This method takes into account conditions in Kansas on a daily basis throughout the study period. Rep., vol. II, at 301-02. These conditions include the river flow at the state line and downstream in Kansas to Garden City, precipitation in Kansas, and whether the ditches in Kansas are diverting essentially all of the flow available to them. *See* R. vol. 89, at 40-50, Pl. App., Item 24. A determination is then made for each day of the study period whether all of the flow at the state line is being used in Kansas either for diversion or groundwater recharge. *Id.* If essentially all of the water flowing across the state line is being used on a certain day, and there is more capacity to use additional water if it is available, then that is a day on which additional flows are assumed to be usable. *Id.* When this analysis is done for a complete month, the percentage of days on which additional flow was determined to be usable is assigned to that month. *Id.* The percentage thus determined is multiplied against the depletions calculated by the Kansas model[12] for that same month.

Colorado also proposed a usable flow method that avoided averaging for periods longer than a month. Rep., vol. II, at 296. It applied its usable flow method in conjunction with the monthly output of its model. *Id.*

Another usable flow methodology is relevant in this context. C.L. Patterson was Chief Engineer for the Colorado Water Conservation Board and one of Colorado's original Compact Com-

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Thus, this Exhibit graphically shows that the two methods are very comparable both before 1975 and after 1982, indicating that it is only the extreme drought conditions present in the years 1975 to 1982 that cause the two methods to diverge with regard to their results. Thus, the reason for the divergence is the undisputed coincidence of high depletions and high usability in those years and not other alleged defects in the method proposed by Kansas.

[12] The Kansas model as used in this Brief is the Kansas Hydrologic-Institutional Model (H-I Model) used to quantify depletions at the state line as a result of post-Compact development in Colorado.

missioners charged with drafting the Compact. Rep., vol. I, at 78, 91. With the approval of the Colorado Attorney General and State Engineer, in February 1944, Mr. Patterson developed a quantitative method for determining usability based on the December 1943 decision of this Court. Jt. Ex. 8, at 23-24 (R. vol. 4, at 141, 142), *reprinted in* Rep., vol. II, at 292. Mr. Patterson's method was sensitive to daily variations in flow as recommended by this Court. *See id.* It limits usable flows to the instantaneous capacity of the Kansas ditches (2,000 cubic feet per second). *Id.* It also has volumetric limits for each month and for each season.[23] *Id.*

The Master's method[24] is based on calculations of average diversions as a percentage of stateline flows and average recharge over long periods of time, 36 years with respect to diversions (1950-85) and 23 years with respect to groundwater recharge (1925-48). *See* Rep., vol. II, at 293-95, 305. The Master's method assumes that 82% of all summer flows and 35% of all winter flows are usable either as surface diversions or as groundwater recharge. *See id.* These percentages are the same year after year from 1950 through 1985. Thus, a portion of the depletions (18% in the summer and 65% in the winter) is *always* considered to be unusable in Kansas regardless of actual conditions.

B. The Master's Averaging Method is Inconsistent with Article IV-D.

The proviso of Article IV-D of the Compact states as follows:

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[23] The percentage of flows determined to be usable each month under both Kansas' method and the Patterson method is given in Pl. Ex. 646 (R. vol. 89, at 62, 85, vol. 99, at 106), Pl. App., Item 4.

[24] In the Report the method proposed by Kansas for approval ultimately by the Court is referred to as the "Spronk Approach" (or "SWE Method"). The method adopted by the Master is referred to in the Report as the "Durbin Approach" (or "HCI method") with "the Larson Modifications." The method proposed by Colorado is referred to as the "Helton Approach." *See* Rep., vol. II, at 293-305.

> Provided, that the waters of the Arkansas River, as defined in Article III, *shall not be materially depleted in usable quantity or availability for use* to the water users in Colorado and Kansas under this Compact . . . . (Emphasis added.)

The plain meaning of the words emphasized above excludes the notion of averaging over multi-year periods and requires consideration of hydrologic variability as it affects supply and demand. The words "in usable quantity or availability" also echo the words of this Court in the 1943 decision in *Colorado v. Kansas*, 320 U.S. 383 at 396-97 as quoted in the Master's Report:

> "The Kansas ditches are capable of diverting water only up to 2,000 c.f.s. When the flow is greater the excess cannot be diverted and used. It is admitted that the character of the flow of the river in Colorado is variable from year to year, from season to season, and from day to day, and the main river below Canon City may be almost without water one day, run a flood the next day, and, on the following day, be in practically its original condition. Thus it appears that both in Colorado and in Kansas there may at one time be flood water unavailable for direct diversion and, at another, not enough water to supply the capacity of diversion ditches. *The critical matter is the amount of divertible flow at times when water is most needed for irrigation. Calculations of average annual flow, which include flood flows, are, therefore, not helpful in ascertaining the dependable supply of water usable for irrigation*". (Emphasis added.) Rep., vol. II, at 291-92 (emphasis in the Report).

Nor was the need to avoid averages to the maximum extent possible lost on the negotiators of the Compact, many of whom were

involved in the Supreme Court case. As a result, Article II of the Compact specifically provides:

> The provisions of this Compact are based on . . . (2) the opinion of the United States Supreme Court entered December 6, 1943, in the case of *Colorado v. Kansas* (320 U.S. 383) concerning the relative rights of the respective States in and to the use of waters of the Arkansas River. . . .

The drafters of the Compact then proceeded to require that the waters of the Arkansas River not be "materially depleted in *usable quantity or availability*," emphasizing the need to observe the usability and availability of waters to the maximum extent possible in line with the insights of the 1943 Supreme Court opinion.

Thus, this Court and the compacting states have recognized the need to assess the usability of flows on a daily basis to the maximum extent possible. Long-term averages were considered "unhelpful" by this Court in 1943 and are inconsistent with Article IV-D of the Compact. And as the Master himself recognized, in parts of the Report other than that quoted above, usable flow averages are not acceptable under the Compact. *See* Rep., vol. I, at 52, vol. II, at 262.

While the Master obviously recognized the shortcomings involved in relying on averages in general, and the mandate from this Court and the Compact itself to avoid such reliance, he chose a method of analyzing usability that relies not just on averages, but long-term averages. The quotation from the opinion of the Court in *Colorado v. Kansas* makes clear that usability varies on a daily basis in the Arkansas River Valley. To accept the Master's approach is tantamount to reading the language "in usable quantity or availability" out of the Compact. Nevertheless, the Master recommended that the Kansas daily analysis of usability be rejected in favor of a method that assesses usability based on averages spanning decades.

The Master's method does not recognize daily variations in usability. *See* Rep., vol. II, at 293-95, 305. It does not even recognize monthly variations or even variations over a full season. *Id.* In fact, it assumes that every irrigation season is like every other irrigation season in the whole 36-year study period. *Id.* It also assumes that every winter season is exactly the same as every other winter season, allowing no variability from year to year, let alone day to day. *Id.* Kansas' method is the only method proposed to the Master which accounts for the kind of variability that was contemplated by the Supreme Court, by the Patterson method and by Article IV-D of the Compact. Further, compared to the Patterson method, Kansas' method is generally lower in its quantification of usability. In fact, the Patterson method yields higher usable flows than Kansas' method in most months. *See* Pl. Ex. 646 (R. vol. 89, at 62, 85, vol. 99, at 106), Pl. App., Item 4.

The Master suggested that Kansas' method produces the greatest amount of depletions of usable flow, by comparing it to the results of the method he ultimately adopted. *See* Rep., vol. II, at 302-03. But Kansas' method always yields lower usable flows than the Patterson method, which was proposed by Colorado shortly after the Supreme Court decision in *Colorado v. Kansas*, 320 U.S. 383 (1943).

C. Kansas' Daily Method is Consistent With Article IV-D.

Both Colorado and Kansas agree that depletions were generally highest during the late 1970s and early 1980s than at any other time during the 1950-85 study period. *See* R. vol. 127, at 120-21, 124, Pl. App., Item 28. The period of drought which occasioned the high pumping and therefore the high depletions of stateline flows also had the effect of increasing the usability of flows in Kansas dramatically. *Id.*, at 123-24. The chief Colorado expert agreed that the usability in Kansas was very high during the 1970s. *See* R. vol. 115 at 33, Pl. App., Item 26. The Kansas evidence for this period shows almost 100% usability. *See* Pl. Ex. 646 (R. vol. 89, at 62, 85, vol. 99, at 106), Pl. App., Item 4. This

was the only evidence specifically addressing this period (1975-82). The Master's choice of an averaging method led him to exclude some 124,000 acre-feet of depletions to usable flow based on the numbers presented by Kansas. *See* Rep., vol. II, at 303. The telling point here is that the averaging method and Kansas' method matched quite closely over more normal hydrologic periods. *Id.* Pl. Ex. 698 (R. vol. 127, at 127, 146), Pl. App., Item 5. The only part of the 1950-85 study period in which the Master's method and Kansas' method differ significantly is the 1975-82 drought period, which is the only part of the study period where high depletions and high usability coincided.

D. The Master Incorrectly Rejected Kansas' Method Based on Unsubstantiated Criticisms.

In the initial part of the trial before the Master, Colorado criticized the usable flow method adopted by the Master because it depended on long-term averages. *See* R. vol. 53 at 143-46, 148-49, Pl. App., Item 21. Colorado's own method varied from month to month. *See* Rep., vol. II, at 296. But Colorado has now developed arguments in an effort to support the long-term averaging method it earlier debunked.

Despite the characteristics of Kansas' method, which make it the only method consistent with Article IV-D, namely its recognition of daily changes in usability, the Master has rejected Kansas' method based on several arguments by Colorado. *See* Rep., vol. II, at 302-05. The first argument raised by Colorado that the Master accepted is that the Kansas model, which calculates the basic depletions at the state line, is itself based on "average data." *Id.* at 302. First, the argument itself is incorrect.[25] Second, Kansas is limited to the data collected in Colorado, the same data which were relied upon by Colorado when the institutional changes

[25] Although certain components of the Kansas model are based on averages, many important components, such as mainstem stream flows, are available and used in the model on a daily basis. R. vol. 54, at 122-23, 125, Pl. App., Item 22.

complained of by Kansas were initiated in Colorado. If the data are sufficient for Colorado to determine that those institutional changes can be undertaken without violating the Compact, that data should also be sufficient for analyzing compliance with the Compact after the fact. In other words, Colorado, not Kansas, should bear the risk of the lack of adequate (non-average) data, as explained more fully *supra* at 28-32. Moreover, the Colorado model is based just as much on average data as the Kansas model is, and Colorado had no hesitation applying its own usable flow method that varied on a monthly basis to the results of its model. Rep., vol. II, at 296. In addition, Colorado makes no claim that its model is more accurate than the Kansas model.

The Master impliedly criticized Kansas for proposing a method that gives a greater amount of depletion of usable flow than the method he chose. *See* Rep., vol. II, at 302-03. However, this is not generally true. The Master's statement is overbroad because it is only during the late 1970s and early 1980s, when high depletions coincided with high usability, that Kansas' method gives higher quantifications of depletions of usable flow than the method he chose. *See* Pl. Ex. 698 (R. vol. 127, at 127, 146), Pl. App., Item 5. In other periods, Kansas' method produces results that are very similar to those of the Master's averaging method. *Id.*

On the basis of arguments made by Colorado, the Master indicated that he believed that the Kansas usable flow method required the Kansas model to be "accurate" on a monthly basis. *See* Rep., vol. II, at 303. Although the Master adopted this factual assertion, Colorado never demonstrated any factual basis for it. The Master stated no factual basis (*see id.*), nor is Kansas aware of any. How uncertainty with regard to the calculated depletions at the state line makes more appropriate a method based on long-term averages is not explained. Several things are clear, however: (1) Any additional water that had come across the state line in the drought of the late 1970s would have been usable in Kansas for either diversion or groundwater recharge, R. vol. 127, at 123-24, 132-33, Pl. App., Item 28; (2) the Master's method does not

recognize that fact, *id.*; and (3) as a result, the Master underestimated the usable depletions for the period 1975-82, *id.*

The question of which usable flow analysis to use is not a question of the accuracy of the Kansas model. Rather, it is a question of the accuracy of the respective usable flow methods, that is, whether it is appropriate to select a usable flow method that ignores the undisputed coincidence of high depletions and high usability in the late 1970s and early 1980s just because the model calculations have uncertainty associated with them. *Id.* Unfounded requirements of accuracy for the Kansas model should not be allowed to defeat a usable flow method which is otherwise the method most compatible with Article IV-D's requirement that the waters of the Arkansas River not be depleted in "usable quantity or availability."

The final objection that the Master suggested in opposition to Kansas' method is that "Colorado's experts also criticized the Spronk usable flow analysis because it did not factor out increased losses in the Arkansas River in Kansas due to increased well development in Kansas in the 1970s. To the extent that well development in Kansas may have increased the amount of streamflow going to groundwater recharge, the point is valid." Rep., vol. II, at 304 (citations omitted). Colorado never established that this concern actually caused the method to give unreasonable results. It is simply a possibility. In fact, Colorado's counterclaim based on the same allegation of increased pumping, was dismissed by the Master for the reason that Colorado had not proved its case. Order Granting Kansas' Motion to Dismiss Colorado's Well Counterclaim. Rep., vol. III, at 447. However, the Master accepted a known shortcoming with the averaging method, namely, the undisputed underestimation of usable depletions in the late 1970s and early 1980s, in order to avoid the possibility of a problem with the better method which Colorado has alleged but has not been able to prove.

The sufficient answer to all criticisms proposed by Colorado and adopted by the Master regarding the usable flow method proposed by Kansas is the fact that outside the critical period of

1975 through 1982 the two methods are essentially the same. Pl. Ex. 698 (R. vol. 127, at 127, 146), Pl. App., Item 5. If the Master's criticisms were valid, the differences between the methods would be more general and would be visible both before and after the critical period. On the contrary, however, the methods are almost identical before 1975 and after 1982. If there is a problem in using Kansas' method because of the alleged monthly inaccuracy of the Kansas model, that same problem would create a difference between the results of the two methods in periods of normal or more normal hydrology. Yet nothing of the sort appears. If effects of increased post-Compact pumping in Kansas were affecting the validity of Kansas' method, this would continue to be the case after the end of the critical period, namely, in the years 1983 through 1985. However, nothing of the sort appears. If the fact that the Kansas model must rely in part on average data were making the use of the Kansas usable flow method inappropriate, the alleged inappropriateness would manifest itself in divergences between the two methods both before and after the critical period. Again, nothing of the sort appears.

CONCLUSION

On the basis of the foregoing, Kansas requests the Court to (1) deny Colorado's Motion to Dismiss Kansas' Trinidad Reservoir Claim and remand the issue to the Master with instructions that the test of Compact compliance is to be compliance with the Trinidad Dam and Reservoir Project Operating Principles adopted by the Arkansas River Compact Administration; (2) accept Kansas' claim that operation of the Colorado Winter Water Storage Program has violated Article IV-D of the Arkansas River Compact, or, in the alternative, remand this issue to the Master for consideration of the effects of accretions on the claim; (3) accept the Kansas usable flow method for purposes of determining compliance with Article IV-D of the Arkansas River Compact; and (4) in all other respects to adopt the Report of the Master.

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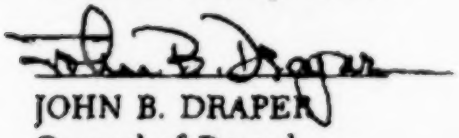

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